

# Temperature & Relative Humidity Control

The importance of temperature and relative humidity (RH) relates to thermoregulation, important for animals or species with limited capacity to regulate body temperature (e.g., neonates, amphibians); respiratory health, because extremes in temperature or RH may exacerbate respiratory conditions or support growth of pathogens or allergens; or other specific pathological problems (e.g., ring tail due to prolonged low RH).

However, the control of temperature and RH is particularly difficult in certain areas due to extreme climate and limitations of heating, ventilation and air conditioning systems. Additionally, animal husbandry activities may provoke temporary fluctuations (e.g., residual water in large species enclosures).

Rather than prescribing rigid numerical limits, AAALAC International embraces a performance-based approach that allows institutions to justify and demonstrate how their environmental parameters meet the needs of the species housed and support the goals of the animal care and use program. In this context, AAALAC encourages institutions to:

- Define acceptable temperature and RH ranges based on species-specific needs, scientific objectives, and local environmental conditions.
- Monitor and document temperature and RH as appropriate for the species and housing conditions.
- Assess the impact of temperature and RH fluctuations on animal health and wellbeing through health surveillance, behavioral monitoring, and outcome-based evaluations.
- Identify/recognize, respond to, and implement corrective actions when temperature and RH levels deviate from the established acceptable range in a manner that could impact animals or research outcomes.
- Comply with local regulatory requirements.

If no issues are identified by the institution or the AAALAC site visit team that may compromise the health and well-being of the animals or jeopardize the integrity of animal studies, then it is not likely that the Council on Accreditation considers this variation a problem. If, however, animal welfare or study issues are reported that can be linked to variation in temperature or relative humidity, then AAALAC expects the institution to address the lack of control of temperature or RH to ensure animal welfare and reliable data.